Center for
Health Statistics

Cerebrovascular Disease Deaths California, 2002

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This Data Summary is one of a series of leading cause of death reports.

Highlights

- **Cerebrovascular disease is the third leading cause of death in California and in the United States.**
- **People aged 65 and older had 88.2 percent of all cerebrovascular disease deaths in California.**
- **California's age-adjusted death rate was 56.3 per 100,000 population.**
- **California has not yet met the Healthy People 2010 National Objective of an age-adjusted death rate of no more than 48 deaths per 100,000 population.**

Introduction

Cerebrovascular disease (stroke) is the third leading cause of death in California and in the United States (U.S.), following heart disease and cancer.[1,2] In addition to being a leading cause of death, stroke is also a major cause of disability. Each year in the United States, approximately 700,000 people will suffer a new or recurrent stroke. About 500,000 of these strokes are first attacks and 200,000 are recurrent attacks.[3] Between 2001 and 2002 preliminary data show cerebrovascular disease deaths among all Americans decreased 0.3 percent from 163,538 deaths in 2001 to 163,010 deaths in 2002.[2,4] Among California residents, cerebrovascular disease deaths decreased 2.9 percent from 18,078 deaths in 2001 to 17,551 deaths in 2002.[1,5]

Due to the prevalence of cerebrovascular disease in this country, the United States Public Health Service established a national health objective for Healthy People 2010, seeking to reduce the number of cerebrovascular disease deaths to an age-adjusted rate of no more than 48 deaths per 100,000 population.[6]

This report presents data on California's cerebrovascular disease deaths for 2002, and provides analysis of crude and age-adjusted death rates for California residents by sex, age, and race/ethnicity. The cerebrovascular disease data included in this report are extracted from vital statistics records with death attributed to cerebrovascular disease as defined by the International Classification of Diseases, Tenth Revision (ICD-10) codes I60-I69 in accordance with the National Center for Health Statistics Reports.[7]

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[1]State of California, Department of Health Services. Death Records. 2002.
[2]National Center for Health Statistics, Deaths: Preliminary Data for 2002, *National Vital Statistics Reports,* Vol. 52, No. 13, DHHS Publication No. (PHS) 2004-1120, PRS 04-0167, February 2004
[3]Centers for Disease Control, Cardiovascular Health: *Stroke Fact Sheet.* May 2003. URL: http://www.cdc.gov/cvh/library/fs_stroke.htm
[4]National Center for Health Statistics, Deaths: Final Data for 2001, *National Vital Statistics Reports,* Vol. 52, No. 3, DHHS Publication No. (PHS) 2003-1120, PRS 03-0436, September 2003.
[5]Wilson, C. *Cerebrovascular Disease Deaths, California 2001*. Center for Health Statistics, State of California, Department of Health Services. November 2003.
[6]U.S. Department of Health and Human Services. *Healthy People 2010 Objectives* (Second Edition, in Two Volumes). Washington, D.C., January 2001.
[7]National Center for Health Statistics. *Vital Statistics, Instructions for Classifying the Underlying Cause of Death ICD –10, 2004.* NCHS Instruction Manual, Part 2A. Hyattsville, Maryland: Public Health Service. 2004.

A description of methods and a brief overview of data limitations and qualifications are provided at the end of this report.

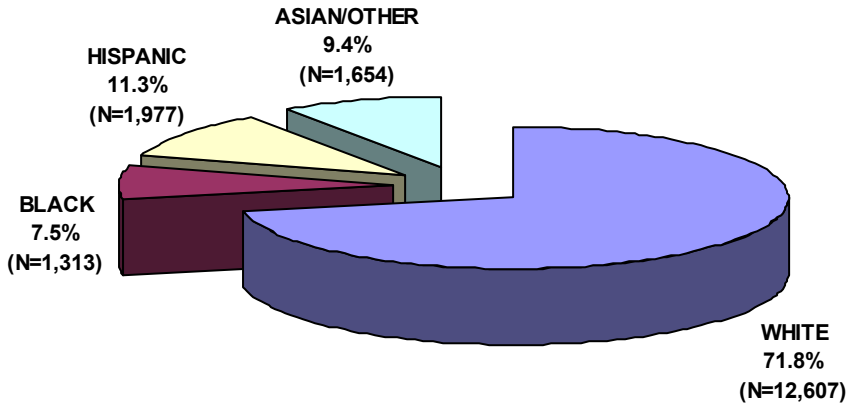
Cerebrovascular Disease Deaths

Table 1 (page 9) shows California's cerebrovascular disease death data by race/ethnicity, age, and sex. In 2002 California's female residents had 59.9 percent of the total cerebrovascular disease deaths and males had 40.1 percent. During this year, the cerebrovascular disease death ratio was 1.5 female deaths for every male death.

For California residents overall and within each of the major race/ethnic groups, cerebrovascular disease deaths were highest among people aged 65 and older. In California, 88.2 percent of all cerebrovascular disease deaths occurred in this age group. Among individual race/ethnic groups, decedents aged 65 and older accounted for 92.7 percent of the deaths among Whites, 81.9 percent among Asian/Other, 74.3 percent among Hispanics, and 74.0 percent among Blacks.

Figure 1 shows Whites had the highest percentage of cerebrovascular disease deaths (71.8 percent) among all California residents, followed by Hispanics (11.3), Asian/Other (9.4), and Blacks (7.5).

FIGURE 1
CEREBROVASCULAR DISEASE DEATHS
BY RACE/ETHNICITY*
CALIFORNIA, 2002
(N=17,551)



Source: State of California, Department of Health Services, Death Records.
***Calculated using death data for California residents only.**

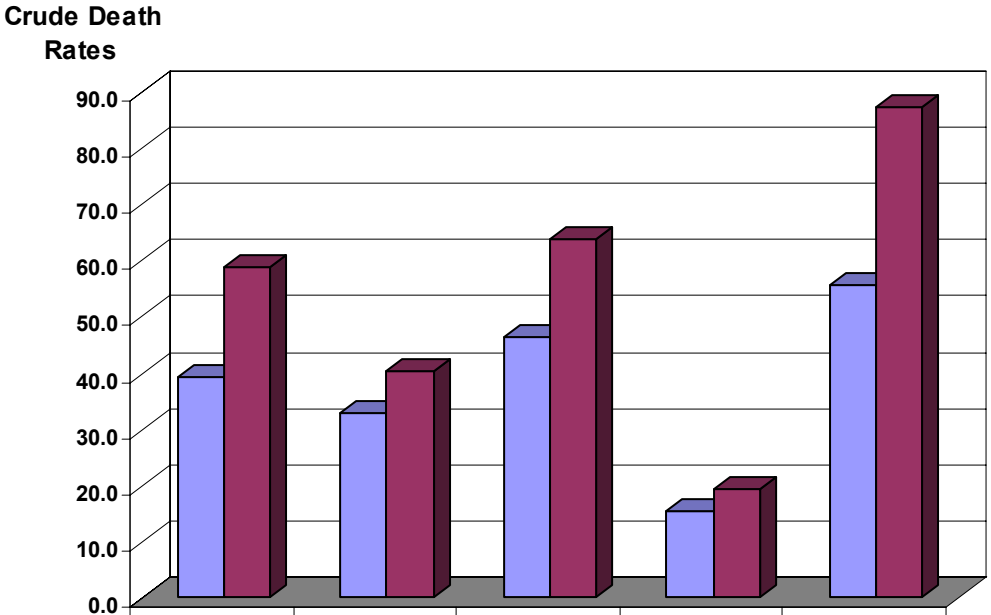
Cerebrovascular Disease Crude Death Rates

Table 1 (page 9) shows California's cerebrovascular disease crude death rate in 2002 was 49.0 per 100,000 population, a decrease of 4.5 percent from the 2001 rate of 51.3.[5] Among the major race/ethnic groups, Whites had the highest crude death rate (71.7), followed by Blacks (55.3), Asian/Other (36.7), and Hispanics (17.4). The crude death rates for Whites, Blacks, Asian/Other, and Hispanics were lower than those reported for 2001.[5]

See the Methodological Approach section later in this report for an explanation of crude and age-specific death rates.

As shown in **Figure 2**, California's female residents had a higher overall crude death rate at 59.0 per 100,000 population, compared with the male rate of 39.2. Similar patterns also occurred among males and females within each race/ethnic group. White females had a rate of 87.5 per 100,000 population, while White males had a rate of 55.7. Black females had a rate of 64.0 compared with Black males with a rate of 46.5. Asian/Other females had a rate of 40.3 and Asian/Other males had a rate of 33.1. Hispanic females had a rate of 19.6, while Hispanic males had a rate of 15.4.

FIGURE 2
CEREBROVASCULAR DISEASE CRUDE DEATH RATES
BY SEX AND RACE/ETHNICITY*
CALIFORNIA, 2002



	TOTAL	ASIAN/OTHER	BLACK	HISPANIC	WHITE
MALE	39.2	33.1	46.5	15.4	55.7
FEMALE	59.0	40.3	64.0	19.6	87.5

Source: State of California, Department of Health Services, Death Records.
***Calculated using death data for California residents only.**

Cerebrovascular Disease Age-Specific Death Rates

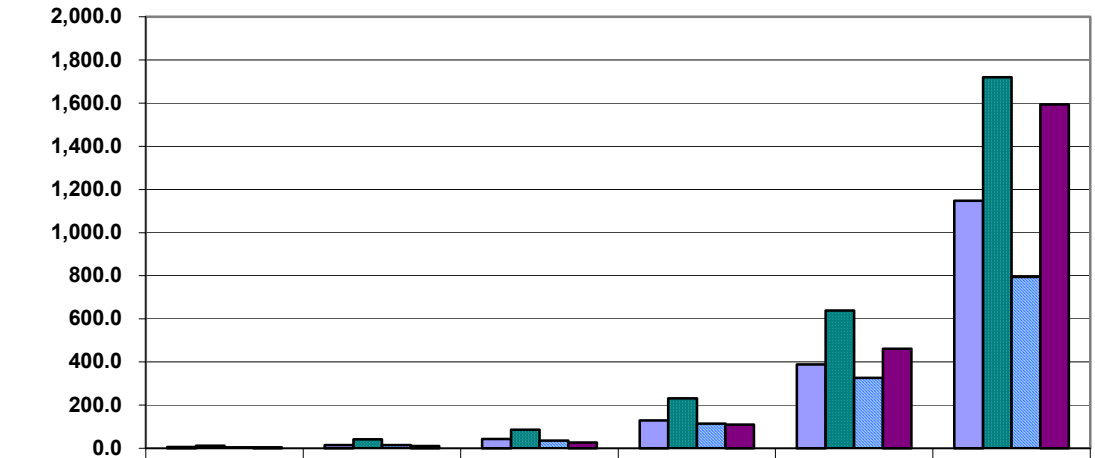
Table 1 (page 9) shows that among California residents, and for each of the major race/ethnic groups, reliable age-specific death rates increased with the age of the decedent.

In California, males had higher reliable age-specific death rates than females, except in the age group 85 and older. This pattern was also consistent for Hispanics and Whites. Among the Asian/Other race group, males had higher reliable age-specific death rates than females, except in the 65 to 74 and 85 and older age groups, and among Blacks, males had higher rates than females, except in the 35 to 44 and 85 and older age groups.

See the Vital Statistics Query System (VSQ) at our Web site www.dhs.ca.gov/hisp/Applications/vsq/vsq.cfm to create your own vital statistics tables.

Figure 3 shows that among the major race/ethnic groups Blacks had the highest reliable age-specific death rates in the 35 through 85 and older age groups. Whites had the lowest reliable age-specific death rates in the 35 through 74 age groups, and Hispanics had the lowest rates in the 75 through 85 and older age groups. Not shown in Figure 3, but displayed in Table 1, Hispanics had the only reliable rate in the age group 25 to 34.

FIGURE 3
CEREBROVASCULAR DISEASE AGE-SPECIFIC DEATH RATES BY RACE/ETHNICITY AND AGE*
CALIFORNIA, 2002



	35-44	45-54	55-64	65-74	75-84	85+
ASIAN/OTHER	5.8	14.2	43.0	129.7	388.9	1,147.0
BLACK	11.5	40.9	85.5	231.7	639.5	1,720.3
HISPANIC	4.0	15.3	36.0	114.1	325.6	795.3
WHITE	3.7	9.9	26.8	109.8	461.5	1,594.1

Source: State of California, Department of Health Services, Death Records.
***Calculated using death data for California residents only.**

Cerebrovascular Disease Age-Adjusted Death Rates

In 2002 California's age-adjusted death rate was 56.3 per 100,000 population, a decrease of 5.2 percent from the 2001 rate of 59.4.[5] The rate difference between 2001 and 2002 was statistically significant. California did not meet the Healthy People 2010 National Health Objective of reducing the number of cerebrovascular disease deaths to an age-adjusted rate of no more than 48.0 per 100,000 population in 2001 or 2002.[5,8]

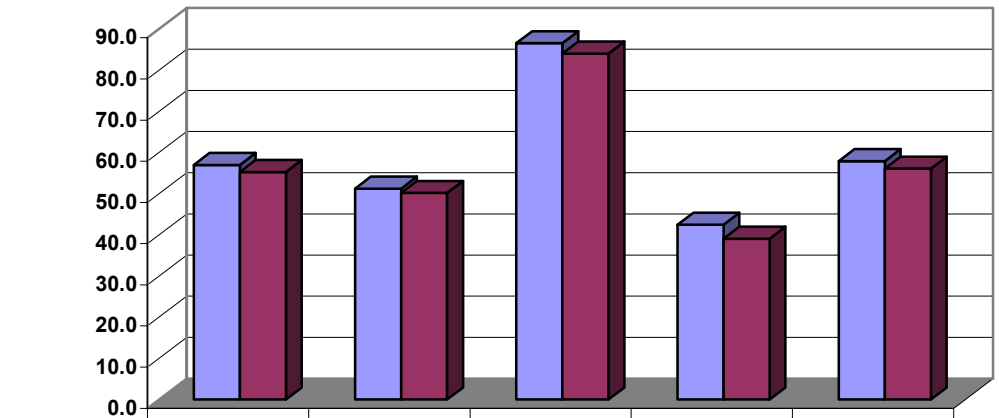
Among the major race/ethnic groups in 2002, Blacks had the highest age-adjusted death rate (86.2) per 100,000 population, followed by Whites (57.1), Asian/Other (50.7), and Hispanics (40.8). The differences in rates between the major race/ethnic groups were statistically significant.

[8] Klein RJ, Schoenborn, CA. *Healthy People 2010 Statistical Notes: Age Adjustment using the 2000 Projected U.S. Population.* National Center for Health Statistics, DHHS Publication, No. 20, January 2001.

You can read more about crude and age-adjusted death rates on the National Center for Health Statistics Web site at www.cdc.gov/nchs

Figure 4 shows males had higher age-adjusted death rates than females overall and among each of the major race/ethnic groups. In California, the male age-adjusted death rate of 57.0 per 100,000 population was not significantly higher than the female rate of 55.3. Similarly, the rate differences between males and females within the major race/ethnic groups were not statistically significant.

FIGURE 4
CEREBROVASCULAR DISEASE AGE-ADJUSTED DEATH RATES
BY SEX AND RACE/ETHNICITY*
CALIFORNIA, 2002



	TOTAL	ASIAN/OTHER	BLACK	HISPANIC	WHITE
MALE	57.0	51.2	86.5	42.4	57.9
FEMALE	55.3	50.2	84.0	39.0	56.1

Source: State of California, Department of Health Services, Death Records.
*Calculated using death data for California residents only.

Cerebrovascular Disease Death Rates for California Counties

Table 2 (page 10) shows the 2000-2002 average number of cerebrovascular disease deaths with crude and age-adjusted death rates for California and its 58 counties.

The highest average number of cerebrovascular disease deaths among California's counties occurred in Los Angeles County (4,279.3), followed by San Diego County (1,551.0), and Orange County (1,333.3).

Among the 46 counties with reliable rates, Napa County had the highest crude death rate (101.7) per 100,000 population and Kings County had the lowest rate (36.3). Among the reliable age-adjusted death rates, Solano County had the highest rate (78.6), and El Dorado County had the lowest rate (42.3).

The Healthy People 2010 National Objective to reduce cerebrovascular disease deaths to an age-adjusted rate of no more than 48.0 deaths per 100,000 population was met by 13 counties (five counties, El Dorado, Madera, San Benito, Santa Cruz, and Tuolumne had reliable rates), but not California as a whole, which had an age-adjusted death rate of 58.9 for the three-year period.

For more data, see DHS Center for Health Statistics, Home Page at www.dhs.ca.gov/org/hisp/chs/chsindex.htm

Cerebrovascular Disease Deaths among the Three City Health Jurisdictions

Table 3 shows the 2000-2002 average number of cerebrovascular disease deaths and crude death rates for California's three city health jurisdictions.

Age-adjusted death rates were not calculated for city health jurisdictions because city population data by age are not available.

TABLE 3
CEREBROVASCULAR DISEASE DEATHS
AMONG THE CITY HEALTH JURISDICTIONS*
CALIFORNIA, 2000-2002

CITY HEALTH JURISDICTION	AVERAGE NUMBER OF DEATHS	2001 POPULATION	CRUDE DEATH RATE
BERKELEY	59.3	103,600	57.3
LONG BEACH	223.0	466,500	47.8
PASADENA	97.7	135,300	72.2

Note: Rates are per 100,000 population; ICD-10 codes I60-I69.
***Calculated using death data for California residents only.**
Source: State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2001-2003 with 2000 DRU Benchmark. State of California, Department of Health Services. Death Records.

Long Beach had the highest average number of deaths (223.0), followed by Pasadena (97.7), and Berkeley (59.3). The crude death rates were 72.2 per 100,000 population for Pasadena, 57.3 for Berkeley, and 47.8 for Long Beach.

Methodological Approach

The methods used to analyze vital statistics data are important. Analyzing only the number of deaths has its disadvantages and can be misleading because the population at risk is not taken into consideration. Crude death rates show the actual rate of dying in a given population, but because of the differing age compositions of various populations, crude rates do not provide a statistically valid method for comparing geographic areas and/or multiple reporting periods. Age-specific death rates are the number of deaths per 100,000 population in a specific age group and are used along with standard population proportions to develop a weighted average rate. This rate is referred to as an age-adjusted death rate and removes the effect of different age structures of the populations whose rates are being compared. Age-adjusted death rates therefore provide the preferred method for comparing different race/ethnic groups, sexes, and geographic areas and for measuring death rates over time. The 2000 population standard is used as the basis for age-adjustments in this report.

Data Limitations and Qualifications

The cerebrovascular disease death data presented in this report are based on the vital statistics records with ICD-10 codes I60-I69 as defined by the National Center for Health Statistics.[2] Deaths by place of residence means that the data include only those deaths occurring to residents of California and its counties, regardless of the place of death.

The term “significant” within the text indicates statistically significant based on the difference between two independent rates ($p < .05$).

As with any vital statistics data, caution needs to be exercised when analyzing small numbers, including the rates derived from them. Death rates calculated from a small number of deaths and/or population tend to be unreliable and subject to significant variation from one year to the next. To assist the reader, 95 percent confidence intervals are provided in the data tables as a tool for measuring the reliability of death rates. Rates with a relative standard error (coefficient of variation) greater than or equal to 23 percent are indicated with an asterisk (*).

Beginning in 1999, cause of death is reported using ICD-10.[9] Causes of death for 1979 through 1998 were coded using the International Classification of Diseases, Ninth Revision (ICD-9). Depending on the specific cause of death, the numbers of deaths and death rates are not comparable between ICD-9 and ICD-10. Therefore, our analyses do not combine both ICD-9 and ICD-10 data.

The four race/ethnic groups presented in the table are mutually exclusive. White, Black, and Asian/Other exclude Hispanic ethnicity, while Hispanic includes any race/ethnic group. In order to remain consistent with the population data obtained from the Department of Finance, the “White race/ethnic group” includes: White, Other (specified), Not Stated, and Unknown; and “Asian/Other race/ethnic group” includes: Aleut, American Indian, Asian Indian, Asian (specified/unspecified), Cambodian, Chinese, Eskimo, Filipino, Guamanian, Hawaiian, Hmong, Japanese, Korean, Laotian, Other Pacific Islander, Samoan, Thai, and Vietnamese. In addition, caution should be exercised in the interpretation of mortality data by race/ethnicity. Misclassification of race/ethnicity on the death certificate may contribute to death rates that may be underestimated among Hispanics and Asian/Other.[10]

Beginning in 2000, federal race/ethnicity reporting guidelines changed to allow the reporting of up to three races on death certificates. The race/ethnic groups in this report were tabulated based on the first listed race on those certificates where more than one race was listed. Race groups for 2000 and later are therefore not strictly compatible with prior years and trends should be viewed with caution.

Effective with 1999 mortality data, the standard population for calculating age-adjustments was changed from the 1940 population standard to the 2000 population standard, in accordance with new statistical policy implemented by the National Center for Health Statistics. The new population standard affects measurement of mortality trends and group comparisons. Of particular note are the effects on race comparisons of mortality.[11] Age-adjusted rates presented in this report are not comparable to rates calculated with different population standards.

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[9] World Health Organization. *International Statistical Classification of Diseases and Related Health Problems. Tenth Revision*. Geneva: World Health Organization. 1992.

[10] Rosenberg HM, et al. Quality of Death Rates by Race and Hispanic Origin: A Summary of Current Research, 1999. *Vital and Health Statistics,* Series 2, No. 128, National Center for Health Statistics, DHHS Pub. No. (PHS) 99-1328, September 1999.

[11] Anderson RN, Rosenberg HM. Age Standardization of Death Rates: Implementation of the Year 2000 Standard. National Vital Statistics Reports; Vol 47, No. 3. Hyattsville, Maryland: National Center for Health Statistics, 1998.

For a more complete explanation of the age-adjustment methodology used in this report, see the "Healthy People 2010 Statistical Notes" publication.[8] Detailed information on data quality and limitations is presented in the appendix of the annual report, "Vital Statistics of California." [12] Formulas used to calculate death rates are included in the technical notes of the "County Health Status Profiles" report.[13]

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[12] Ficenec S, Bindra K, Christensen J. *Vital Statistics of California, 2001*. Center for Health Statistics, California Department of Health Services, April 2004.

[13] Shippen S, Wilson C. *County Health Status Profiles 2004*. Center for Health Statistics, California Department of Health Services, April 2004.

TABLE 1
CEREBROVASCULAR DISEASE DEATHS BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 2002
(By Place of Residence)

AGE GROUPS	DEATHS			POPULATION			RATES			95% CONFIDENCE LIMITS					
										TOTAL		MALE		FEMALE	
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	LOWER	UPPER	LOWER	UPPER	LOWER	UPPER
TOTAL															
UNDER 1	15	7	8	565,286	289,063	276,223	2.7 *	2.4 *	2.9 *	1.3	4.0	0.6	4.2	0.9	4.9
1 - 4	4	3	1	2,259,315	1,155,699	1,103,616	0.2 *	0.3 *	0.1 *	0.0	0.4	0.0	0.6	0.0	0.3
5 - 14	13	9	4	5,779,949	2,962,038	2,817,911	0.2 *	0.3 *	0.1 *	0.1	0.3	0.1	0.5	0.0	0.3
15 - 24	22	10	12	4,878,693	2,531,467	2,347,226	0.5	0.4 *	0.5 *	0.3	0.6	0.2	0.6	0.2	0.8
25 - 34	66	39	27	4,876,792	2,566,475	2,310,317	1.4	1.5	1.2	1.0	1.7	1.0	2.0	0.7	1.6
35 - 44	265	147	118	5,762,850	2,962,675	2,800,175	4.6	5.0	4.2	4.0	5.2	4.2	5.8	3.5	5.0
45 - 54	659	355	304	4,794,731	2,387,728	2,407,003	13.7	14.9	12.6	12.7	14.8	13.3	16.4	11.2	14.0
55 - 64	1,031	573	458	3,041,927	1,484,478	1,557,449	33.9	38.6	29.4	31.8	36.0	35.4	41.8	26.7	32.1
65 - 74	2,388	1,187	1,201	1,998,910	931,513	1,067,397	119.5	127.4	112.5	114.7	124.3	120.2	134.7	106.2	118.9
75 - 84	6,038	2,578	3,460	1,360,295	557,358	802,937	443.9	462.5	430.9	432.7	455.1	444.7	480.4	416.6	445.3
85 & OLDER	7,049	2,135	4,914	483,490	155,701	327,789	1,457.9	1,371.2	1,499.1	1,423.9	1,492.0	1,313.1	1,429.4	1,457.2	1,541.1
UNKNOWN	1	0	1												
TOTAL	17,551	7,043	10,508	35,802,238	17,984,195	17,818,043	49.0	39.2	59.0	48.3	49.7	38.2	40.1	57.8	60.1
AGE-ADJUSTED							56.3	57.0	55.3	55.5	57.1	55.6	58.3	54.2	56.3
ASIAN/OTHER															
UNDER 1	2	1	1	71,070	36,363	34,707	2.8 *	2.8 *	2.9 *	0.0	6.7	0.0	8.1	0.0	8.5
1 - 4	1	1	0	282,531	144,555	137,976	0.4 *	0.7 *	0.0 +	0.0	1.0	0.0	2.0	-	-
5 - 14	0	0	0	704,536	362,486	342,050	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
15 - 24	1	1	0	647,043	331,690	315,353	0.2 *	0.3 *	0.0 +	0.0	0.5	0.0	0.9	-	-
25 - 34	11	6	5	679,965	344,174	335,791	1.6 *	1.7 *	1.5 *	0.7	2.6	0.3	3.1	0.2	2.8
35 - 44	42	24	18	719,105	350,905	368,200	5.8	6.8	4.9 *	4.1	7.6	4.1	9.6	2.6	7.1
45 - 54	88	46	42	620,977	294,261	326,716	14.2	15.6	12.9	11.2	17.1	11.1	20.1	9.0	16.7
55 - 64	155	90	65	360,153	170,641	189,512	43.0	52.7	34.3	36.3	49.8	41.8	63.6	26.0	42.6
65 - 74	302	117	185	232,917	104,165	128,752	129.7	112.3	143.7	115.0	144.3	92.0	132.7	123.0	164.4
75 - 84	542	236	306	139,375	58,899	80,476	388.9	400.7	380.2	356.1	421.6	349.6	451.8	337.6	422.8
85 & OLDER	510	211	299	44,465	18,527	25,938	1,147.0	1,138.9	1,152.7	1,047.4	1,246.5	985.2	1,292.5	1,022.1	1,283.4
UNKNOWN	0	0	0												
TOTAL	1,654	733	921	4,502,137	2,216,666	2,285,471	36.7	33.1	40.3	35.0	38.5	30.7	35.5	37.7	42.9
AGE-ADJUSTED							50.7	51.2	50.2	48.2	53.2	47.4	55.0	46.9	53.4
BLACK															
UNDER 1	3	2	1	37,035	18,947	18,088	8.1 *	10.6 *	5.5 *	0.0	17.3	0.0	25.2	0.0	16.4
1 - 4	0	0	0	148,422	75,963	72,459	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-
5 - 14	2	2	0	412,599	209,510	203,089	0.5 *	1.0 *	0.0 +	0.0	1.2	0.0	2.3	-	-
15 - 24	2	1	1	370,840	196,122	174,718	0.5 *	0.5 *	0.6 *	0.0	1.3	0.0	1.5	0.0	1.7
25 - 34	10	5	5	340,450	181,068	159,382	2.9 *	2.8 *	3.1 *	1.1	4.8	0.3	5.2	0.4	5.9
35 - 44	44	20	24	382,583	187,179	195,404	11.5	10.7	12.3	8.1	14.9	6.0	15.4	7.4	17.2
45 - 54	128	62	66	312,810	147,562	165,248	40.9	42.0	39.9	33.8	48.0	31.6	52.5	30.3	49.6
55 - 64	153	89	64	178,888	82,569	96,319	85.5	107.8	66.4	72.0	99.1	85.4	130.2	50.2	82.7
65 - 74	252	128	124	108,774	48,191	60,583	231.7	265.6	204.7	203.1	260.3	219.6	311.6	168.7	240.7
75 - 84	399	162	237	62,397	24,072	38,325	639.5	673.0	618.4	576.7	702.2	569.3	776.6	539.7	697.1
85 & OLDER	320	76	244	18,601	5,543	13,058	1,720.3	1,371.1	1,868.6	1,531.8	1,908.8	1,062.8	1,679.4	1,634.1	2,103.0
UNKNOWN	0	0	0												
TOTAL	1,313	547	766	2,373,399	1,176,726	1,196,673	55.3	46.5	64.0	52.3	58.3	42.6	50.4	59.5	68.5
AGE-ADJUSTED							86.2	86.5	84.0	81.4	90.9	78.8	94.3	78.0	90.0
HISPANIC															
UNDER 1	8	4	4	276,097	141,109	134,988	2.9 *	2.8 *	3.0 *	0.9	4.9	0.1	5.6	0.1	5.9
1 - 4	1	0	1	1,083,387	553,994	529,393	0.1 *	0.0 +	0.2 *	0.0	0.3	-	-	0.0	0.6
5 - 14	7	4	3	2,502,767	1,279,414	1,223,353	0.3 *	0.3 *	0.2 *	0.1	0.5	0.0	0.6	0.0	0.5
15 - 24	13	5	8	1,717,001	889,356	827,645	0.8 *	0.6 *	1.0 *	0.3	1.2	0.1	1.1	0.3	1.6
25 - 34	34	24	10	1,748,261	960,276	787,985	1.9	2.5	1.3 *	1.3	2.6	1.5	3.5	0.5	2.1
35 - 44	71	46	25	1,756,084	951,727	804,357	4.0	4.8	3.1	3.1	5.0	3.4	6.2	1.9	4.3
45 - 54	170	101	69	1,113,871	570,189	543,682	15.3	17.7	12.7	13.0	17.6	14.3	21.2	9.7	15.7
55 - 64	205	111	94	569,723	279,445	290,278	36.0	39.7	32.4	31.1	40.9	32.3	47.1	25.8	38.9
65 - 74	390	206	184	341,805	157,826	183,979	114.1	130.5	100.0	102.8	125.4	112.7	148.3	85.6	114.5
75 - 84	597	255	342	183,377	76,439	106,938	325.6	333.6	319.8	299.4	351.7	292.7	374.5	285.9	353.7
85 & OLDER	481	151	330	60,479	19,997	40,482	795.3	755.1	815.2	724.2	866.4	634.7	875.6	727.2	903.1
UNKNOWN	0	0	0												
TOTAL	1,977	907	1,070	11,352,852	5,879,772	5,473,080	17.4	15.4	19.6	16.6	18.2	14.4	16.4	18.4	20.7
AGE-ADJUSTED							40.8	42.4	39.0	38.9	42.6	39.4	45.4	36.6	41.4
WHITE															
UNDER 1	2	0	2	181,084	92,644	88,440	1.1 *	0.0 +	2.3 *	0.0	2.6	-	-	0.0	5.4
1 - 4	2	2	0	744,975	381,187	363,788	0.3 *	0.5 *	0.0 +	0.0	0.6	0.0	1.3	-	-
5 - 14	4	3	1	2,160,047	1,110,628	1,049,419	0.2 *	0.3 *	0.1 *	0.0	0.4	0.0	0.6	0.0	0.3
15 - 24	6	3	3	2,143,809	1,114,299	1,029,510	0.3 *	0.3 *	0.3 *	0.1	0.5	0.0	0.6	0.0	0.6
25 - 34	11	4	7	2,108,116	1,080,957	1,027,159	0.5 *	0.4 *	0.7 *	0.2	0.8	0.0	0.7	0.2	1.2
35 - 44	108	57	51	2,905,078	1,472,864	1,432,214	3.7	3.9	3.6	3.0	4.4	2.9	4.9	2.6	4.5
45 - 54	273	146	127	2,747,073	1,375,716	1,371,357	9.9	10.6	9.3	8.8	11.1	8.9	12.3	7.7	10.9
55 - 64	518	283	235	1,933,163	951,823	981,340	26.8	29.7	23.9	24.5	29.1	26.3	33.2	20.9	27.0
65 - 74	1,444	736	708	1,315,414	621,331	694,083	109.8	118.5	102.0	104.1	115.4	109.9	127.0	94.5	109.5
75 - 84	4,500	1925	2575	975,146	397,948	577,198	461.5	483.7	446.1	448.0	475.0	462.1	505.3	428.9	463.4
85 & OLDER	5,738	1697	4041	359,945	111,634	248,311	1,594.1	1,520.1	1,627.4	1,552.9	1,635.4	1,447.8	1,592.5	1,577.2	1,677.6
UNKNOWN	1	0	1												
TOTAL	12,607	4,856	7,751	17,573,850	8,711,031	8,862,819	71.7	55.7	87.5	70.5	73.0	54.2	57.3	85.5	89.4
AGE-ADJUSTED							57.1	57.9	56.1	56.1	58.1	56.3	59.5	54.8	57.3

Note: ICD-10 Codes I60-I69; rates are per 100,000 population.
Year 2000 U.S. standard population is used for age-adjusted rates.
White, Black, and Asian/Other exclude Hispanic ethnicity.

* Death rate unreliable, relative standard error is greater than or equal to 23 percent.
\+ Standard error indeterminate, death rate based on no (zero) deaths.
\- Confidence limit is not calculated for no (zero) deaths.

The race/ethnic groups on this table were tabulated based on the first listed race on those certificates where more than one race was listed.

Source: State of California, Department of Finance, 2002 Population Projections with Age, Sex and Race/Ethnic Detail, December, 1998.
State of California, Department of Health Services, Death Records.

TABLE 2
CEREBROVASCULAR DISEASE DEATHS
CALIFORNIA COUNTIES, 2000-2002
(By Place of Residence)

COUNTY	2000-2002 DEATHS (AVERAGE)	PERCENT	2001 POPULATION	CRUDE RATE	AGE-ADJUSTED RATE	95% CONFIDENCE LIMITS	
						LOWER	UPPER
CALIFORNIA	17,906.3	100.0	35,233,335	50.8	58.9	58.0	59.7
ALAMEDA	823.7	4.6	1,492,004	55.2	64.0	59.6	68.3
ALPINE	0.0	0.0	1,268	0.0 +	0.0 +	-	-
AMADOR	28.3	0.2	35,242	80.4	51.9	32.5	71.3
BUTTE	181.3	1.0	213,040	85.1	56.1	47.9	64.4
CALAVERAS	30.7	0.2	43,392	70.7	48.7	31.3	66.1
COLUSA	6.7	a	22,012	30.3 *	28.9 *	6.9	51.0
CONTRA COSTA	603.3	3.4	942,662	64.0	67.4	62.0	72.8
DEL NORTE	14.3	0.1	31,801	45.1 *	38.4 *	18.4	58.4
EL DORADO	69.0	0.4	168,912	40.8	42.3	32.3	52.4
FRESNO	434.3	2.4	825,365	52.6	63.0	57.1	68.9
GLENN	16.0	0.1	30,291	52.8 *	48.6 *	24.7	72.6
HUMBOLDT	85.3	0.5	129,211	66.0	64.1	50.5	77.8
IMPERIAL	61.3	0.3	161,177	38.1	49.0	36.7	61.3
INYO	16.3	0.1	18,510	88.2 *	53.7 *	27.5	80.0
KERN	321.3	1.8	694,749	46.3	55.4	49.4	61.5
KINGS	47.0	0.3	129,375	36.3	56.3	40.1	72.4
LAKE	61.0	0.3	62,080	98.3	56.8	42.3	71.4
LASSEN	12.7	0.1	36,759	34.5 *	38.3 *	17.2	59.4
LOS ANGELES	4,279.3	23.9	9,925,413	43.1	55.1	53.4	56.7
MADERA	58.3	0.3	131,052	44.5	47.3	35.2	59.5
MARIN	177.3	1.0	249,634	71.0	67.5	57.6	77.5
MARIPOSA	10.3	0.1	17,218	60.0 *	39.5 *	15.0	64.0
MENDOCINO	67.7	0.4	91,963	73.6	65.2	49.6	80.7
MERCED	107.3	0.6	219,936	48.8	65.8	53.4	78.3
MODOC	8.0	a	10,589	75.6 *	51.3 *	15.5	87.0
MONO	3.3	a	11,081	30.1 *	41.2 *	0.0	86.7
MONTEREY	197.0	1.1	409,511	48.1	61.0	52.4	69.5
NAPA	131.3	0.7	129,130	101.7	74.3	61.5	87.2
NEVADA	91.0	0.5	99,670	91.3	60.3	47.8	72.8
ORANGE	1,333.3	7.4	2,872,632	46.4	64.0	60.5	67.4
PLACER	164.0	0.9	252,688	64.9	67.6	57.2	78.0
PLUMAS	11.3	0.1	21,044	53.9 *	35.4 *	14.7	56.1
RIVERSIDE	924.3	5.2	1,626,134	56.8	54.6	51.1	58.2
SACRAMENTO	786.3	4.4	1,236,054	63.6	73.0	67.9	78.1
SAN BENITO	21.3	0.1	53,577	39.8	47.2	27.2	67.3
SAN BERNARDINO	707.7	4.0	1,771,707	39.9	58.5	54.2	62.9
SAN DIEGO	1,551.0	8.7	3,005,038	51.6	58.4	55.5	61.4
SAN FRANCISCO	562.3	3.1	794,342	70.8	55.1	50.5	59.7
SAN JOAQUIN	386.3	2.2	593,538	65.1	69.0	62.1	75.9
SAN LUIS OBISPO	160.7	0.9	262,123	61.3	49.7	42.0	57.4
SAN MATEO	449.3	2.5	759,313	59.2	58.5	53.1	63.9
SANTA BARBARA	249.0	1.4	417,331	59.7	58.1	50.9	65.3
SANTA CLARA	718.7	4.0	1,795,132	40.0	56.3	52.1	60.5
SANTA CRUZ	115.0	0.6	264,525	43.5	45.5	37.2	53.9
SHASTA	120.7	0.7	179,892	67.1	57.5	47.2	67.8
SIERRA	1.3	a	3,465	38.5 *	23.0 *	0.0	62.9
SISKIYOU	34.0	0.2	45,624	74.5	54.7	36.1	73.3
SOLANO	221.7	1.2	408,095	54.3	78.6	68.1	89.0
SONOMA	346.0	1.9	468,682	73.8	66.1	59.1	73.0
STANISLAUS	249.0	1.4	472,096	52.7	60.7	53.1	68.2
SUTTER	53.3	0.3	83,999	63.5	60.2	44.0	76.5
TEHAMA	42.7	0.2	57,642	74.0	54.1	37.7	70.4
TRINITY	10.0	0.1	13,605	73.5 *	56.0 *	21.1	90.9
TULARE	205.7	1.1	388,730	52.9	62.6	54.0	71.2
TUOLUMNE	37.7	0.2	57,497	65.5	46.2	31.3	61.0
VENTURA	371.0	2.1	763,586	48.6	59.6	53.5	65.7
YOLO	89.3	0.5	167,259	53.4	64.0	50.7	77.3
YUBA	39.7	0.2	64,938	61.1	74.8	51.5	98.2

Note: ICD-10 codes I60-I69; rates are per 100,000 population.

* Death rate unreliable (relative standard error is greater than or equal to 23 percent).

a Represents a percentage of more than zero but less than 0.05.

\+ Standard error indeterminate, death rate based on no (zero) deaths.

\- Confidence limit is not calculated for no (zero) deaths.

Source: State of California, Department of Finance, 2002 Population Projections with Age, Sex, and Race/Ethnic Detail, December, 1998.
State of California, Department of Health Services, Death Records.